



Application No. 10/028,768
Amendment dated September 11, 2006
After Final Office Action of May 10, 2006

Docket No.: 2658-0281P

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A liquid crystal display device, comprising:
a substrate;
a gate electrode over the substrate;
a first semiconductor layer over the substrate;
a source electrode and a drain electrode over the first semiconductor layer, the source and drain electrodes having a first metal layer and a second metal layer formed in a same pattern and defining and forming a separation between the source electrode and drain electrode, wherein the second metal layer is adapted to be a dry etching mask to pattern the first metal layer so that etched side-walls of the first metal layer and the second metal layer are substantially aligned instead of being over-etched when the device is manufactured;
a gate insulating film over the gate electrode and between the substrate and the first semiconductor layer;
a second semiconductor layer between the first metal layer and the first semiconductor layer, the second semiconductor layer defining a portion of the separation region in the same pattern as the first and second metal layers;
a protective layer over the source and drain electrodes; and
a pixel electrode provided on the protective layer.
2. (Canceled)
3. (Original) The liquid crystal display device as claimed in claim 1, wherein the first metal layer includes molybdenum (Mo) or titanium (Ti).
4. (Original) The liquid crystal display device as claimed in claim 1, wherein the second metal layer includes aluminum (Al), an Al alloy, copper (Cu) or a Cu alloy.
5. (Previously Presented) A liquid crystal display device, comprising:
a substrate;

a gate electrode over the substrate;
a gate insulating film over the gate electrode;
a first semiconductor layer over the gate electrode;
a source electrode and a drain electrode over the first semiconductor layer, the source electrode and drain electrode including a first metal layer and a second metal layer patterned to form a separation region between the source and drain electrodes;
a second semiconductor layer beneath the first metal layer and having a same pattern as the first metal layer; and
a protective layer over the source and drain electrodes; and a pixel electrode over the protective layer;
wherein the second metal layer is adapted to be a dry etching mask to pattern the first metal layer so that etched side-walls of the first metal layer and the second metal layer are substantially aligned instead of being over-etched when the device is manufactured.

6. (Canceled)

7. (Original) The liquid crystal display device as claimed in claim 5, wherein the first metal layer includes Molybdenum (Mo) or titanium (Ti).

8. (Original) The liquid crystal display device as claimed in claim 5, wherein the second metal layer includes aluminum (Al), an Al alloy, copper (Cu) or Cu alloy.

9-20. (Canceled)

21. (Previously Presented) The liquid crystal display device as claimed in claim 1, further comprising an ohmic contact layer over the first semiconductor layer, wherein inner edges of said ohmic contact layer facing said separation space are aligned with inner edges of said first metal layer.

22. (Previously Presented) The liquid crystal display device as claimed in claim 5, further comprising an ohmic contact layer over the first semiconductor layer, wherein inner edges of said ohmic contact layer facing said separation space are aligned with inner edges of said first layer.

23. (Currently Amended) A liquid crystal display device, comprising:
a substrate;
a gate electrode over the substrate;
a first semiconductor layer over the substrate;
an ohmic contact layer over the first semiconductor layer; and
a source electrode and a drain electrode over the first semiconductor layer, the source and drain electrodes having a first metal layer and a second metal layer formed in a same pattern and defining a separation between the source electrode and drain electrode, wherein the second metal layer is adapted to be a dry etching mask to pattern the first metal layer so that etched side-walls of the first metal layer and the second metal layer are substantially aligned instead of being over-etched when the device is manufactured; and wherein inner edges of said ohmic contact layer facing said separation space are aligned with inner edges of said first metal layer;
a gate insulating film over the gate electrode and between the substrate and the first semiconductor layer;
a second semiconductor layer between the first metal layer and the first semiconductor layer, the second semiconductor layer defining a portion of the separation region in the same pattern as the first and second metal layers;
a protective layer over the source and drain electrodes; and
a pixel electrode provided on the protective layer.

24. (Canceled)

25. (Previously Presented) The liquid crystal display device as claimed in claim 23, wherein the first metal layer includes molybdenum (Mo) or titanium (Ti).

26. (Previously Presented) The liquid crystal display device as claimed in claim 23, wherein the second metal layer includes aluminum (Al), an Al alloy, copper (Cu) or a Cu alloy.

27. (Previously Presented) The liquid crystal display device of claim 5, wherein the source and drain electrodes comprise a buffer metal layer and a data metal layer.